

Amendments to the specification

Replace paragraph extending from the end of page 14 through the top of page 15 with the replacement paragraph below marked up to show changes to the prior version:

A first improved geometry for the hole array that produces a smaller illumination pattern is shown in Fig. 4 of the drawings. A thin metal conductive film ~~106~~ 105 exhibiting the index N_2 is affixed to a substrate 109 constructed of a dielectric material having the index N_3 and a bandgap that is larger than the frequency of the illumination of light. In fluorescence studies, if multi-photon excitement is employed, the bandgap should be larger than the sum of the photonic energies of the photons that would be simultaneously absorbed by the fluorophore. The thin layer of conducting material 105 should be thicker than the skin depth of the metal at the chosen wavelengths. The geometry and composition of the heterogeneous structure seen in Fig. 4 should be chosen so that a maximum of transmission of illumination occurs through the hole 107 at the chosen illumination wavelength. A tunable or broad band light source may also be used to tune the wavelength to predetermined hole dimensions.